

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 13-22 and 27 are pending in this application. Claims 18, 19, and 22 stand withdrawn from consideration. Claims 13 and 17 were objected to for informalities. Claims 13-17, 20, 21, and 27 were rejected under 35 U.S.C. § 112, second paragraph. Claims 13, 15, 17, 20, 21, and 27 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. 6,165,822 to Okuno et al. (herein "Okuno"). Claims 13, 14, and 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. 5,893,736 to Lee et al. (herein "Lee") in view of Okuno. The above-noted objection and rejections are traversed as now discussed.

First, addressing the objection to claims 13 and 17, claim 13 is amended to recite "the high concentration gate region" at lines 10 and 13, as suggested in the Office Action. Claim 27 is also amended as suggested in the Office Action to address the objection thereto.

Addressing now the rejection of claims 13-17, 20, 21, and 27 under 35 U.S.C. § 112, second paragraph, the claims are herein amended to address that rejection.

Initially, applicants note the claims no longer refer to a "depletion part" but now instead recite a "non-implanted portion" and recite the high concentration gate region being "adjacent to a non-implanted portion that is an exposed part of the upper surface of the lower deposition film". The features clarified in the claims are believed to be clear from the original disclosure, see for example the specification at page 17, lines 18-21; page 18, line 24 to page 19, line 4; page 21, lines 22-29; page 26, lines 28-31; and page 27, lines 10-13.

Claim 13 is also herein amended to delete the language at lines 11-12 noted as unclear in the Office Action.

The presently submitted amendments are believed to address the outstanding rejection under 35 U.S.C. § 112, second paragraph.

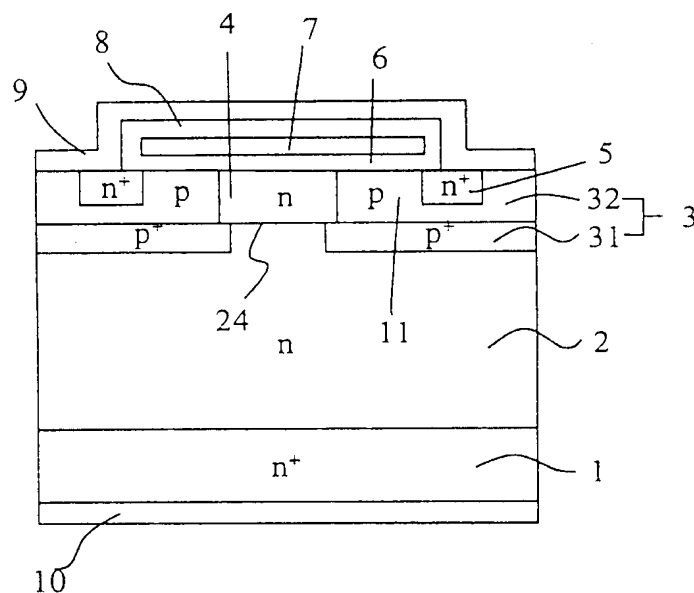
Addressing now the above-noted prior art rejections, the claims as written are believed to clearly distinguish over the applied art.

Applicants submit the applied art particularly does not disclose or suggest the upper deposition film including:

a low concentration base region of the first conductivity type formed on the non-implanted portion and having a greater width than the non-implanted portion . . .

As shown for example in Figure 4 in the present specification, reprinted below, a low concentration base region 4 of the first conductivity type (n-type) is formed on the non-implanted portion adjacent to the high concentration gate region 31 (see the portion between the high concentration gate regions 31 below the low concentration base region 4). Further, that low concentration base region 4 has a *greater width* than the non-implanted portion.

**F I G . 4**



One grounds for rejection in the outstanding Office Action cites Okuno for example in Figure 7C to disclose a high concentration gate region 30a or 30b on a low concentration base region as the “arbitrary portion of 2 between 30a and 30b”.<sup>1</sup>

In reply to that grounds for rejection, as noted above the claims now more clearly recite the high concentration gate region being adjacent to a non-implanted portion that is an exposed part of the upper surface of the lower deposition film. Applicants submit Okuno does not disclose such a non-implanted portion adjacent the cited high concentration gate region 30a, 30b, particularly as the Office Action relies upon a portion of element 2 between 30a and 30b in Okuno to correspond to the claimed low concentration base region. The arbitrary portion of 2 between 30a, 30b clearly cannot correspond to both such elements of a “non-implanted portion that is an exposed part of an upper surface of a lower deposition film adjacent a high concentration gate region” and additionally “a low concentration base region formed on a non-implanted portion”.

Moreover, applicants also note the claims as noted above clearly recite the low concentration base region being formed on the non-implanted region and having a ***greater width*** than the non-implanted portion. Applicants submit as shown for example in Figure 7C of Okuno all arbitrary portions of 2 between 30a, 30b would be narrower than any cited non-implanted portion and not correspond to such a base region formed on a non-implanted region wider than the non-implanted portion.

Thereby, applicants submit the features recited in amended independent claim 13 as currently written, and accordingly the claims dependent therefrom, positively recite features neither taught nor suggested by Okuno.

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<sup>1</sup> Office Action of October 27, 2009, the paragraph bridging pages 4 and 5 (see specifically prenumbered paragraphs 6, lines 10-14 and 27-32).

Further, the rejection of claims 13, 14, and 16 under 35 U.S.C. § 103(a) as unpatentable over Lee in view of Okuno is also traversed, as now discussed.

That rejection relies on Lee to disclose for example in Figure 1 the claimed high concentration gate region is an arbitrary portion of 20 between two  $p^+$  regions, and relies on Lee to disclose the claimed low concentration base region as a portion of 22 between two  $p^-$  regions formed on the depletion part of the arbitrary portion of 20 between two  $p^+$  regions.<sup>2</sup>

Applicants submit those citations in Lee differ from the claimed features as the cited arbitrary portion of 20 between the two  $p^+$  regions does not correspond to the claimed “high concentration gate region that is adjacent to a non-implanted portion that is an exposed part of the upper surface of the lower deposition film” and at the same time correspond to “a low concentration base region formed on a non-implanted region and having a greater width than the non-implanted portion”. Moreover, the element in Figure 1 of Lee above the portion between the two  $p^+$  regions is *not wider than* that portion between the two  $p^+$  regions, and thereby clearly a low concentration base region formed on a non-implanted region and having a *greater width* than the non-implanted regions is also neither taught nor suggested by Lee.

Moreover, Okuno as noted above suffers from the same deficiencies as in Lee, and thus cannot cure the deficiencies in Lee with respect to such claimed features.

In view of the present response applicants submit independent claim 13 as currently written, and accordingly the claims dependent therefrom, positively recite features neither taught nor suggested by the applied art, and thus are allowable over the applied art.

Applicants also note the present response has maintained withdrawn claims 18, 19, and 22, which each depend on independent claim 13, and thereby at this time applicants submit reinstatement of those withdrawn claims 18, 19, and 22 is proper.

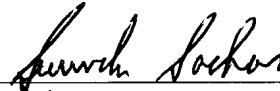
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<sup>2</sup> Office Action of October 27, 2009 the paragraph bridging pages 7 and 8 (see specifically prenumbered paragraph 8, lines 10-13 and 23-27).

As no other issues are pending in this application, it is respectfully submitted this application is in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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